

WISHA REGIONAL DIRECTIVE

DOSH Services

Department of Labor and Industries

11.20 APPLICATION OF STANDARDS TO ADDRESS HEAT RELATED ILLNESS IN THE OUTDOOR ENVIRONMENT

Date Issued: July 13, 2006

I. Background

Heat related illness is a well known, recognized workplace hazard. All work operations involving exposure to temperature and humidity extremes have the potential for inducing heat stress and heat related illness¹.

The current standard, WAC 296-62-09013, *Temperature Extremes*, addresses indoor heat related illness. On April 19, 2006, the Department of Labor and Industries (L&I) announced its decision to issue an emergency rule modifying this existing standard to expand its application to the outdoor environment. This emergency rule is effective June 1, 2006.

Any employer that has employees who do work in moderate to high temperature and/or humidity conditions, and that elevates the heart rate and causes increased perspiration, needs to be prepared for potential heat related illness (HRI). There are four rules which, when implemented and followed, will reduce the risk of heat induced stress/illness. Those rules are:

- Evaluate if heat could be a problem on a particular day based on temperature and humidity levels, and then implement adequate controls, methods or procedures to reduce the risk of HRI, per **WAC 296-62-09013**.

¹ Washington State Department of Labor & Industries. WISHA Technical Manual, Section 2, Heat Stress

- The Accident Prevention Program (APP) must address the provisions that will be put in place to reduce the potential for heat related illness/stress and when to implement those provisions (such as a training program informing employees about the effects of heat stress, health conditions that may increase risk, implementing an acclimatization program, establishing provisions for a work/rest regimen so that exposure time to high temperatures and/or the work rate is decreased, providing access to areas that will provide for cooling down when necessary, etc.) This is per **WAC 296-800-140** or the applicable vertical standard (see Appendix B for additional standards that apply).
- Provide and encourage workers to drink adequate amounts of safe drinking water. This is per **WAC 296-800-23005** or the applicable vertical standard.
- Ensure appropriate first aid is available. Teach employees to recognize heat-related illness symptoms and take steps to prevent heat-induced illnesses. Have specific procedures to be followed for employees exhibiting symptoms of heat-related illness and ensure prompt medical attention. This is per **WAC 296-800-15005** or the applicable vertical standard.

II. Scope and Application

This WISHA Regional Directive (WRD) provides guidance to Division of Occupational Safety and Health (DOSH) enforcement and consultation staff initiating inspections or consultations at job sites where workers outdoors may be exposed to temperature extremes, radiant heat, humidity, or limited air movement, while working. It replaces all other instructions on this issue; whether formal or informal.

III. Compliance and Consultation Protocols

Are employers required to follow the WRD and use the Heat Stress Index (described on page 3)?

No. The WRD is intended to be specific guidance for DOSH staff on how to assess if there is a potential for workplace hazards. It is up to the employer to determine when applicable controls and methods should be implemented for their worksite.

How is DOSH staff expected to schedule inspections related to heat stress issues?

DOSH will use its regular workplace consultation and compliance programs to assess heat stress related working conditions.

How is DOSH staff expected to evaluate a work place for heat stress issues?

Staff are expected to determine if an employer has evaluated their workplace and assessed if their employees could be at risk for heat stress. Factors such as air temperature, humidity, workload, clothing insulation, personal protective equipment use, and employee reports of symptoms can be taken into consideration to make a reasonable determination of risk.

Staff will reference the Heat Stress Index (HSI) issued by the National Oceanic and Atmospheric Administration (NOAA) to predict risk. A copy of the Heat Stress Index is included in Appendix A of this WRD. DOSH, in exercising its enforcement discretion, has determined that **an HSI of 100 or higher** warrants the implementation of precautionary measures as outlined in the employer's Accident Prevention Program (APP) to ensure protection of employees to heat related illness or stress. **(NOTE: It is up to the employer to determine when applicable controls and methods should be implemented for their worksite.)**

How should DOSH staff cite heat stress violations?

WAC 296-62-09013 must be cited when workers are exposed to high temperature or high temperature conditions and adequate controls, methods or procedures have not been implemented. For example, WAC 296-62-09013 should be cited when employers have not considered and implemented adequate controls to reduce employee's exposure to temperature extremes (an HSI greater than 100 is documented). This will be cited as a serious violation. If the HSI is less than 100, no citation of WAC 296-62-09013 will be issued.

The CSHO should check the OSHA 300 log for indications of prior heat stress symptoms/problems.

Assess if the employer included an element on heat related illness/stress (HRI) in their APP. The APP should describe:

- how the employer will assess risk for HRI,
- a training element that provides employees information on what the employer will do in hot weather work conditions,
- an element on first aid including how to identify HRI symptoms and proper first aid application for an individual that is suffering from HRI, and procedures for summoning medical aid personnel, and
- an element on ensuring adequate drinking water will be available.

These elements are the minimal elements an employer must address in their APP. If the employer does not have these elements in their APP and there has not been a day where the HSI has exceeded 100, a general violation will be issued for not tailoring the APP to the hazards associated with heat related illness. If the APP does not have these elements and there has been a documented HSI of 100 or greater at the time of the inspection, a serious violation will be issued.

Violations of specific industry requirements should be cited under the specific requirement. For example, construction employers who have not tailored their written accident prevention program to address heat hazards should be cited under WAC 296-155-110; in agriculture, the appropriate citation would be WAC 296-307-030, etc.

Pertinent rules for heat stress may be found in Appendix B or on L&I's heat stress web page:

<http://www.lni.wa.gov/safety/topics/atoz/heatstress/default.asp>

Ensure that employees have access to drinking water. Failure to have accessible drinking water when the HSI is at 100 or greater will be a serious violation of the applicable code.

Ensure that employees recognize the symptoms of HRI and know what to do in the event of a first aid event. Lack of training in this area will be cited as a serious violation of the applicable code.

The following are some questions for employer interviews: What are the potential sources of heat? What heat stress problems have been encountered? Are supervisors trained to detect/evaluate heat stress symptoms? Does the employer have procedures in place to address a heat stress illness?

Ask employees what heat stress problems or symptoms they have experienced? What type of action has the employee or employer taken to minimize heat stress? Are cool rest areas provided? Are employee's provided with sufficient breaks and or water during extreme temperatures? Are employee's aware of what the symptoms are for heat stress? Does the employer check on work crews more often during extreme temperatures?

What are some of the symptoms of heat stress related illnesses?

Heat cramps are painful muscle spasms that usually occur in the legs or abdomen. They are caused by the failure to replace fluids or electrolytes, such as sodium or potassium. Heat cramps are the least severe of heat related illnesses. Treatment includes moving a person to a cooler place, stretching muscles for cramps, and giving cool water or electrolyte-containing fluid to drink.

Heat exhaustion is an early indicator that the body's cooling system is becoming overwhelmed. Symptoms include headaches, dizziness, lightheadedness, or fainting; weakness and clammy or moist skin; mood changes such as irritability or confusion; upset stomach or vomiting. It can lead to heat stroke if ignored. Treatment includes moving the person to a cooler place, and if the person is conscious, providing small amounts of cool water to drink. Fan the victim to circulate the air while applying water with a cool cloth.

Heat stroke is a medical emergency caused by the failure of the body's cooling system. Symptoms include dry, hot skin with no sweating; mental confusion or losing consciousness; seizures or fits. Treatment includes all of the elements for heat exhaustion and contacting 911 immediately for medical assistance.

NOTE: Pesticide poisoning has similar symptoms as heat exhaustion.

Appendix C contains a document titled "Hot Weather Advisory", which includes information for employers and employees on working outdoors in hot weather.

How will training programs be evaluated?

Sample DOSH training materials are available on the L&I safety web site, and a sample APP can be found in Appendix D. All DOSH training materials are generic in nature and must be supplemented by the employer to include workplace specific information.

Safety training should include at a minimum:

- The environmental and personal risk factors for heat stress;
- The different types of heat stress and the common signs and symptoms of heat stress
- The employer's procedures for identifying, evaluating, and controlling exposure
- The employer's procedures for responding to symptoms of possible heat related illness, including a process to summon medical aid personnel

Safety training must be provided prior to job assignment. The employer should periodically evaluate the need for additional training (e.g., once a year).

Are there any special actions that compliance or consultation staff must take before issuing a citation or letter on a heat stress issue?

Yes. Any heat stress related citation must be reviewed by the Compliance Administrator or their designee prior to the closing conference. Any heat stress related letter that is to be issued by a consultant must be reviewed by the Consultation Administrator or their designee prior to being sent.

Will there be a transition period for enforcement?

Employers were given a 30-day transition period which ended July 1, 2006, to add the appropriate elements to their Accident Prevention Program, provide training, and ensure compliance with applicable standards. Compliance staff was

instructed not to issue a citation related to heat stress prevention until after July 1, 2006.

There have been many questions asked about this rule and DOSH enforcement policy—are there answers available to these questions?

Yes. Appendix E contains Frequently Asked Questions and the answers for each of these questions.

Approved: _____
Stephen M. Cant, Assistant Director
Division of Occupational Safety and Health

For further information about this or other WISHA Regional Directives, you may contact DOSH Compliance Operations at P.O. Box 44648, Olympia, WA 98504-4648 -- or by telephone at (360) 902-5460. You also may review policy information on the DOSH website (<http://www.lni.wa.gov/Safety/>).

APPENDIX A

Attached on the following page is the National Oceanic and Atmospheric Association's Heat Stress Index (HSI). DOSH staff is expected to use this index as a tool to determine if heat related illness/stress (HRI) may be a concern for an employer.

It has been determined that **an HSI of 100 or higher** warrants the implementation of precautionary measures requiring an inspector or consultant to ensure an employer has an Accident Prevention Program that addresses the elements listed in this WRD, adequate water, and appropriate first aid requirements to ensure protection of employees to heat related illness or stress.

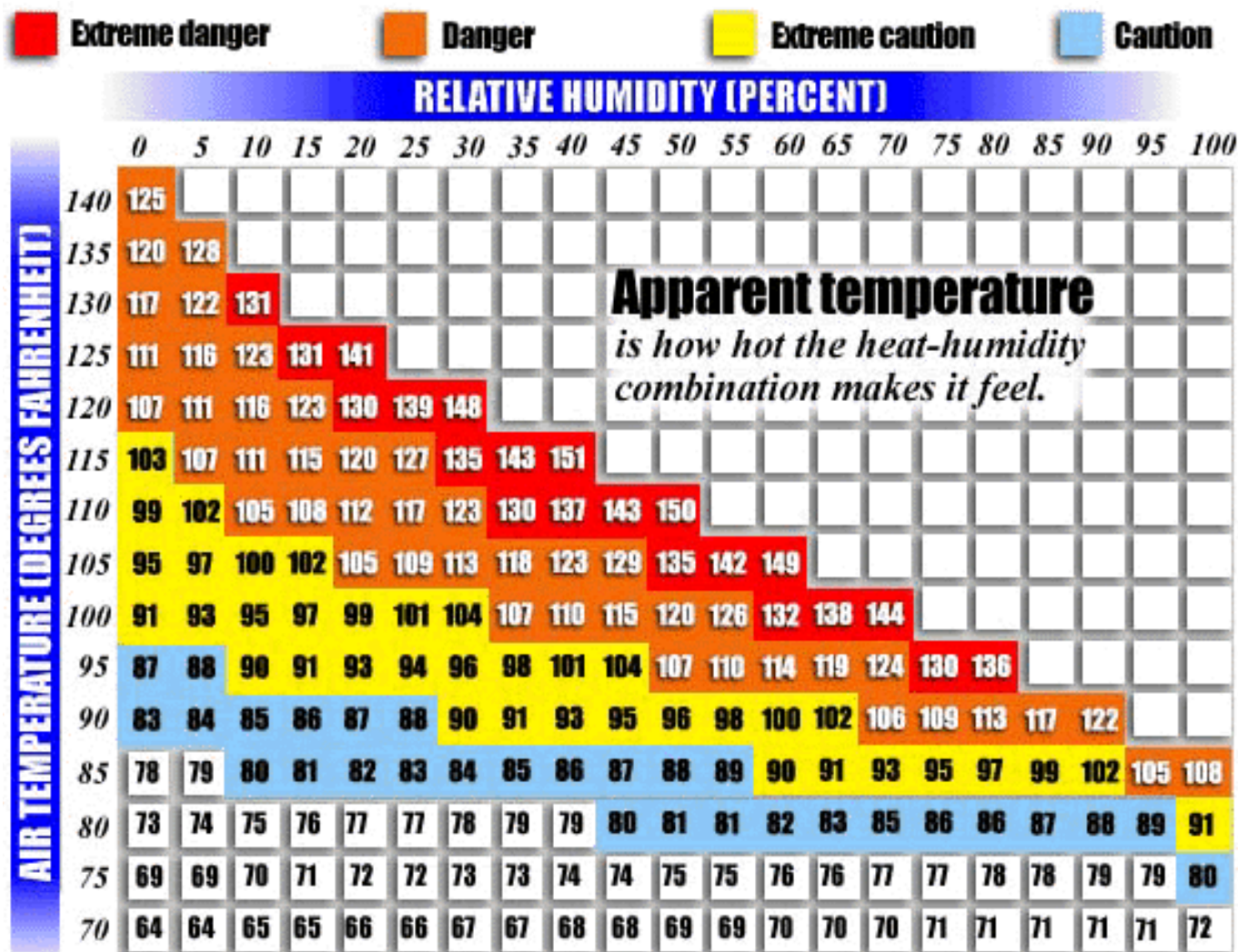
Employers are **NOT** required to use this graph to assess risk of HRI; they must determine when adequate controls and methods are needed for their work site.

This chart can be accessed at the following web site:

<http://www.crh.noaa.gov/dvn/tools/heatindex.pdf>

NOAA's National Weather Service Heat Index

Heat Index	General Effect of Heat Index on People in Higher Risk Groups
80 to 89° - Caution	Fatigue possible with prolonged exposure and/or physical activity
90 to 104° - Extreme Caution	Sunstroke, heat cramps and heat exhaustion possible with prolonged exposure and/or physical activity
105 – 129° – Danger	Sunstroke, heat cramps or heat exhaustion likely, and heatstroke possible with prolonged exposure and/or physical activity
130° or higher – Extreme Danger	Heat/Sunstroke highly likely with continued exposure

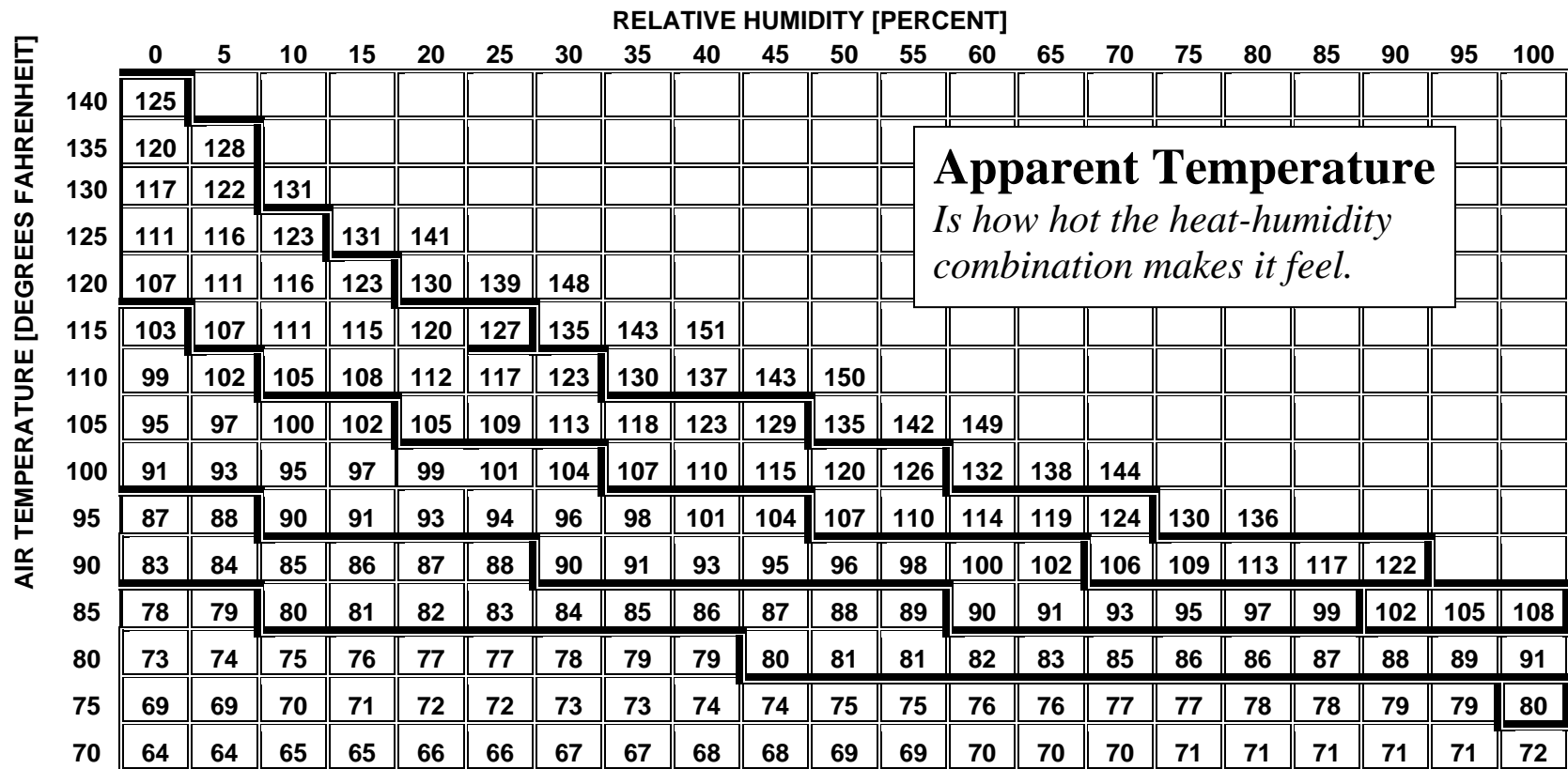


NOAA's National Weather Service Heat Index

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<i>Heat Index</i>	<i>General Effect of Heat Index on People in Higher Risk Groups</i>
80 to 89 -- Caution	Fatigue possible with prolonged exposure and/or physical activity
90 to 104 Extreme Caution	Sunstroke, heat cramps and heat exhaustion possible with prolonged exposure and/or physical activity
105 – 129 -- Danger	Sunstroke, heat cramps or heat exhaustion likely, and heatstroke possible with prolonged exposure and/or physical activity
130 or higher – Extreme Danger	Heat/Sunstroke highly likely with continued exposure



NOTE: This is a duplicate of the color chart for printing on black and white printers.

The chart below is another example of a NOAA Heat Stress Index that may be helpful for an employer. DOSH personnel will not use this chart to determine if an employer is above an HSI of 100; it is strictly for informational purposes.

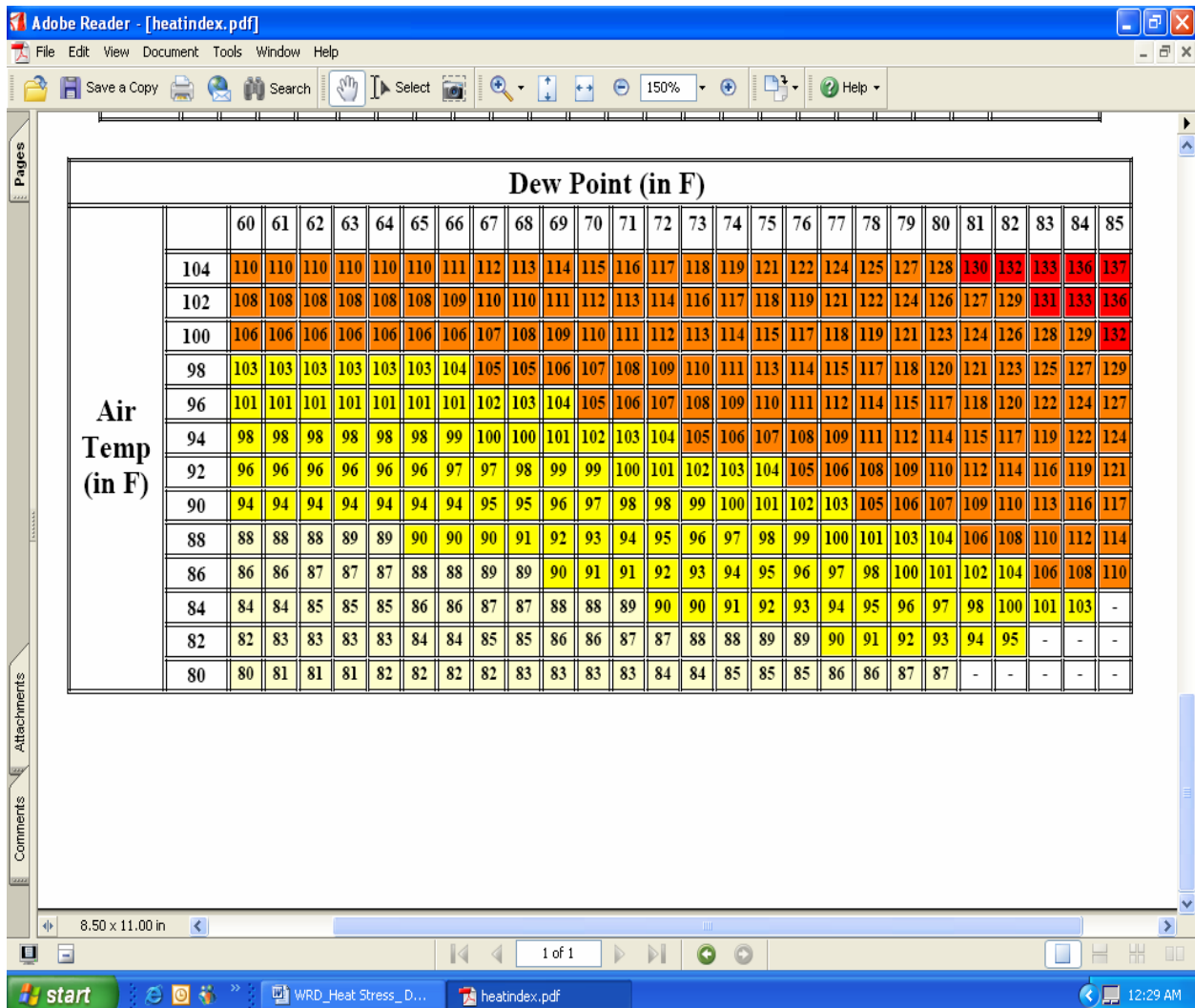
		Temperature (°F)																
		80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110	
Relative Humidity (%)	40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136	
	45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137		
	50	81	83	85	88	91	95	99	103	108	113	118	124	131	137			
	55	81	84	86	89	93	97	101	106	112	117	124	130	137				
	60	82	84	88	91	95	100	105	110	116	123	129	137					
	65	82	85	89	93	98	103	108	114	121	128	136						
	70	83	86	90	95	100	105	112	119	126	134							
	75	84	88	92	97	103	109	116	124	132								
	80	84	89	94	100	106	113	121	129									
	85	85	90	96	102	110	117	126	135									
	90	86	91	98	105	113	122	131										
	95	86	93	100	108	117	127											
	100	87	95	103	112	121	132											

Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

Caution
 Extreme Caution
 Danger
 Extreme Danger

The chart below contains a different method of assessing a heat stress index by using Dew Point temperatures instead of relative humidity. This chart may be helpful for an employer. DOSH personnel will not use this chart to determine if an employer is above an HSI of 100; it is strictly for informational purposes. This chart can be accessed at the following web site:

<http://www.crh.noaa.gov/dvn/tools/heatindex.pdf>



APPENDIX B

Attached are the industry specific standards that are applicable for heat stress issues. This information may also be found at our L&I website:

<http://www.lni.wa.gov/safety/topics/atoz/heatstress/default.asp>

APPENDIX C

Attached is a “Hot Weather Advisory” document that was mailed to employers in early May. It contains information that an employer may want to use in their Accident Prevention Program or to share during a training session. This information may also be found at our L&I website:

<http://www.lni.wa.gov/safety/topics/atoz/heatstress/default.asp>

APPENDIX D

Below is a sample of what an employer may want to have in their Accident Prevention Program. It contains the minimal elements that DOSH personnel would be looking for in an employers APP. As with any instructional material provided by Labor and Industries, it is not all encompassing and would have to be modified to meet the needs of the employer's business and work environment.

Definitions:

“Heat Related Illness” (HRI) means a serious medical condition resulting from the body's inability to cope with a particular heat load, and includes heat cramps, heat exhaustion, heat syncope and heat stroke.

“Environmental risk factors for heat illness” means working conditions that create the possibility that heat illness could occur, including air temperature, relative humidity, radiant heat from the sun and other sources, conductive heat sources such as the ground, air movement, workload severity and duration, protective clothing and personal protective equipment worn by employees. These conditions will be considered when determining that (the employer) is implementing controls and methods to reduce the potential for heat related illness.

“Personal risk factors for heat illness” means factors such as an individual's age, degree of acclimatization, health, water consumption, alcohol consumption, caffeine consumption, and use of prescription medications that affect the body's water retention or other physiological responses to heat.

“Shade” means blockage of direct sunlight. Canopies, umbrellas and other temporary structures or devices may be used to provide shade. Some shade producing areas are not adequate to cool the body; for instance, a car sitting in the sun does not provide acceptable shade to a person inside it, unless the car is running with air conditioning.

Implementation of (the employer's) Heat Stress program:

(The employer would include how they determine when appropriate controls and methods should be put in place to ensure heat related incidents do not

occur to employees. This could be a pre-determined temperature, use of a heat index graph or any other method the employer deems appropriate.)

Training:

Employee training: Training in the following topics will be provided to all supervisory and non-supervisory employees:

- environmental and personal risk factors for heat illness
- procedures for identifying, evaluating, and controlling exposures to the environmental and personal risk factors for heat illness
- the importance of frequent consumption of water
- the importance of acclimatization
- the different types of heat illness and the common signs and symptoms of heat illness
- the importance of immediately reporting to the employer or designee symptoms or signs of heat illness
- procedures for responding to symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary
- procedures for contacting emergency medical services, and if necessary, for transporting employees to a point where they can be reached by medical service personnel
- how to provide clear and precise directions to the work site

Supervisor training: Prior to assignment to supervision of employees working in the heat, training on the following topics will occur:

- the information provided for employee training
- procedures the supervisor will follow to implement controls as determined by the employer
- procedures the supervisor will follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response procedures

Controls for reducing heat exposure:

(The employer would include how they will reduce the potential for heat stress to occur. This could be a work/rest regimen, starting jobs earlier and ending earlier to avoid the hot times of the day, provisions for gaining access to shade, identifying the onset of heat related symptoms and the methods used to cool an employee off, etc.)

Provisions for water:

(The employer would indicate where water would be stored, how employees will be encouraged to drink water on hot days, etc.)

First Aid awareness and actions in the event of a heat related illness:

(The employer would indicate in this section what the main types of heat related illnesses are, how to identify the symptoms of an employee being affected by the heat or experiencing one of the heat related illnesses, and the appropriate actions to take to reduce the effects of the heat related illness. One way to accomplish this would be through including the following definitions and training personnel on treatment options.)

Sample first aid awareness section:

Heat cramps are painful muscle spasms that usually occur in the legs or abdomen. They are caused by the failure to replace fluids or electrolytes, such as sodium or potassium. Heat cramps are the least severe of heat related illnesses. Treatment includes moving a person to a cooler place, stretching muscles for cramps, and giving cool water or electrolyte-containing fluid to drink.

Heat exhaustion is an early indicator that the body's cooling system is becoming overwhelmed. Symptoms include headaches, dizziness, lightheadedness, or fainting; weakness and clammy or moist skin; mood changes such as irritability or confusion; upset stomach or vomiting. It can lead to heat stroke if ignored. Treatment includes moving the person to a cooler place, and if the person is conscious, providing small amounts of cool water to drink. Fan the victim to circulate the air while applying water with a cool cloth.

Heat stroke is a medical emergency caused by the failure of the body's cooling system. Symptoms include dry, hot skin with no sweating; mental confusion or losing consciousness; seizures or fits. Treatment includes all of the elements for heat exhaustion and contacting 911 immediately for medical assistance.

NOTE: Pesticide poisoning has similar symptoms as heat exhaustion.

APPENDIX E

Attached are Frequently Asked Questions related to Heat Stress, Heat Related Illness, this WISHA Regional Directive, and other elements of interest. Further questions can be submitted to FURK235@lni.wa.gov.

Heat Related Illness in the Outdoor Environment

Frequently Asked Questions

Program implementation

1. *Have you consulted with other states about heat stress, such as Texas, Arizona, or California? What are those states doing and can we follow their examples regarding rules and training?*

L&I has reviewed multiple heat related illness resources and programs. While developing a heat related illness prevention program employers are encouraged to seek information from authoritative sources such as government/regulatory agencies, industry groups, and scientific bodies. Minimum program requirements are detailed in WISHA Regional Directive (WRD) 11.20, Application of Standards to Address Heat Related Illness in the Outdoor Environment
<http://www.lni.wa.gov/Safety/Rules/Policies/default.asp>

2. *Will there be one rule for both sides of the state even though Eastern Washington is hotter?*

Yes, there is only one rule. All employers who have employees working outdoors are responsible for evaluating the heat hazard and taking measure(s) to effectively eliminate or minimize the hazard; employers in the hottest environment or where there are more hot days in the summer are more affected.

3. *Is it OK for employers to recommend that workers with health problems or those taking medication voluntarily wear a "medic alert" tag in case they need first aid treatment for heat illness?*

The rule does not require this but there is nothing prohibiting an employer from making such a recommendation.

4. *Must we pay workers who take extra breaks due to heat illness prevention activities such as drinking extra water and taking extra breaks in the shade?*

The employer must provide a workplace that is free from recognized hazards. Any action by the employer to discourage employees from protecting themselves from exercising reasonable protections, such as docking pay, may be considered a violation of the WISH Act. Appropriate rest breaks for heat illness prevention are part of the employer's safety program and are not considered an employee benefit.

5. *What is the employer's responsibility for employee medical issues that may affect their response to heat exposure?*

The employer's training program should make employees aware of personal factors (physical fitness level, obesity, medications, etc.) that increase the risk for experiencing heat stress illness.

Determining risk

6. *Are employers required to use the NOAA National Weather Service Heat Index chart to determine risk and implement precautionary measures?*

While the employer may choose to use the NOAA heat stress index, its use is not mandatory. It is up to the employer to determine when applicable controls and methods should be implemented. For example, an employer may choose to implement precautionary measures whenever the air temperature is expected to reach >80 degrees F. The determination as to when precautionary measures are to be instituted is based on careful consideration of several factors: temperature/humidity trends, workload, PPE use, and workforce acclimation.

7. *Was the NOAA National Weather Service Heat Index chart developed using normal clothing?*

The NOAA Heat Index chart does not take clothing type, PPE use, etc. into account. When calculating the Heat Index using the NOAA chart, the employer should add 10-15 degrees Fahrenheit when employees are working in direct sun, or must wear heavy clothing or PPE that might contribute to the body's overall heat load.

8. *How do you define "temperature extreme"?*

There is no single definition for "temperature extreme." Temperature extremes are dependent on a combination of factors that include, but are not limited to ambient temperature, humidity, workload, and personal health. However, at its basis, extreme heat exposure occurs in situations in which the total heat load (environmental plus metabolic [workload and personal]) exceeds the capacity of the body to maintain normal body functions without excessive strain.

Training and education

9. *Will the DOSH heat related illness training resource CD be available in all L&I offices?*

Yes, heat related illness training resources are available through the DOSH consultation program in your local L&I office or by calling 1-800-574-2829. Heat related illness resources may also be found on the L&I Heat Stress web page

<http://www.lni.wa.gov/safety/topics/atoz/heatstress/default.asp>

10. *What constitutes acceptable heat illness training for rule compliance purposes?*

Heat illness training must be specific to an employer's workplace and include, at a minimum:

- The environmental and personal risk factors for heat stress;
- The different types of heat stress and the common signs and symptoms of heat stress
- The employer's procedures for identifying, evaluating, and controlling exposure
- The employer's procedures for responding to symptoms of possible heat stress illness

11. *Will the L&I Heat Illness Training Kit meet rule requirements to train employees about heat illness?*

The L&I Heat Illness Training Kit provides materials and information needed to meet employee training requirements. You may use these materials to train employees on how to prevent heat illness, how to recognize heat illness, and what to do if someone experiences heat illness. You may also use different materials if you believe that they will be more effective. To access the DOSH Heat Illness and other Training Kits go to

<http://www.lni.wa.gov/Safety/TrainTools/Trainer/Kits/default.asp>

12. *Will our company's first aid class, which includes heat illness training, meet rule requirements?*

Generic first aid training would generally not meet the training requirements contained in WISHA Regional Directive (WRD) 11.20, Application of Standards to Address Heat Related Illness in the Outdoor Environment. However, L&I recognizes that some employers may provide specialized first aid training that would meet the requirements of an effective heat stress training program. L&I will evaluate training programs on a case-by-case basis.

13. *Which employees must receive heat related illness training, and will we be required to provide such training annually?*

Employers are responsible to determine whether they have employees who may work under conditions that increase the risk of developing heat related illness. Generally, any employee who works in moderate to high temperature and/or humidity conditions, and performs physical activities that elevate the heart rate and/or causes increased perspiration, needs to be prepared for potential heat related illness (HRI).

Safety training must be provided prior to job assignment. The employer should periodically evaluate the need for additional training (e.g., once a year).

14. *Must training be documented, what training records must we keep and for how long?*

There are no specific training documentation requirements however L&I recommends that employers maintain written safety training programs and document employee training, e.g., employee name, job position and date of training. Training records should be kept for at least as long as that training remains current. During an

inspection, training records are often the only means of establishing that appropriate training has been given.

15. *Will L&I broadcast public service announcements just before or during heat waves?*

L&I is not able to monitor weather conditions throughout the state and alert employers whenever geographic weather conditions may prompt initiation of heat related illness protections. It is reasonable to expect that employers and employees will keep themselves aware of weather conditions through general information sources (television, radio, newspaper.) When scheduling work that may be performed in high temperature/humidity conditions the employer may consult weather forecast resources such as national weather service forecasts for Washington State <http://iwin.nws.noaa.gov/iwin/wa/wa.html>

Drinking water

16. *How much water will the rule require that our employees consume?*

The rule does not require that a specific amount of water be consumed. The employer must supply and provide ready access to water in sufficient amounts so that drinking water is readily available throughout a work shift. L&I encourages workers who work in hot weather to drink regularly, even when not thirsty (a cup about every 15 minutes is recommended). Employees should receive training regarding the importance of maintaining adequate hydration and recommendations for fluid intake.

17. *If employees drink more water, they will have to use the toilet more frequently. Will the rule or the rule guidance address toilet availability and time to use them?*

The rule and WRD do not address toilet facilities, however, toilet facilities must be provided as required by the WISHA Core Rules or an industry specific standard.

18. *Will employers be required to provide containers filled with water for van drivers or installers who use vans in hot weather conditions? Can we instead ask employees in these circumstances to provide their own water, e.g. bottled water or canteen?*

Employers are responsible for providing potable water as required by the WISHA Core Rules or an industry specific standard. Potable water must be provided in sufficient amounts, taking into account the air temperature, humidity, and the nature of the work performed, to meet employees' needs.

19. *How can employers persuade workers paid by piece rate to take breaks to drink water? Workers won't lose money to take a water or rest-in-shade break.*

Providing clear, consistent information on the hazards posed by overexposure to heat and the benefits of scheduled rest breaks and fluid intake is an effective behavior motivator. Employees generally understand that the small amount of time used to prevent overheating protects their health and overall earning power. An employer is responsible for setting conditions of employment including requirements for rest breaks in hot weather.

20. *Workers who drink lots of water will lose productivity both because they need to take extra water breaks and because drinking lots of water "bogs you down". Are employers supposed to absorb these costs?*

The small amount of time necessary to stay hydrated should not adversely affect productivity. In the vast majority of cases water can be made readily available at the work site.

Regular water intake simply maintains fluid levels lost in sweat and during work exertion. Employees will not be "bogged down," and should actually become more productive.

Shaded areas

21. *Must employers make shaded areas available at all times?*

The rule does not specifically require that shaded rest areas be made available at all times. Employers must consider provision of shaded rest areas (e.g., canopies, lean-to, and umbrellas) as needed. Shade is basically blockage of direct sunlight and can be provided by buildings, trees, and other like structures as long as direct sunlight is

blocked. Employees should be trained to move to shaded areas for rest when recovering from the effects of heat

Safety equipment

22. *Must we invest in misting fans, cooling vests, or other expensive tools?*

Not necessarily. Employers are required to evaluate the heat exposure hazard in relation to the workplace and work processes. Engineering controls such as fans and cooling vests should be considered when other controls (e.g., acclimatization work/rest schedules) are insufficient to control the heat exposure hazard.

Rule enforcement

23. *How will the rule be enforced?*

DOSH will use its regular workplace consultation and compliance programs to assess heat stress related working conditions.

Enforcement guidance for the outdoor environment is contained in WRD 11.20 Application of Standards to Address Heat Related Illness in the Outdoor Environment. Additional enforcement direction related to heat exposure in all work settings is contained in chapter 4, section 2 of the WISHA Technical Manual. These resources can be found on the DOSH Heat stress web page.

24. *Will heat rule violations be cited as general or serious?*

A serious violation of WAC 296-62-09013 will be cited when workers are exposed to high temperature conditions and adequate controls, methods or procedures have not been implemented. A high temperature condition is defined as a Heat Stress Index greater than 100 using the NOAA National weather Service Heat Index chart. If the HSI is less than 100, a citation under WAC 296-62-09013 will not be issued.

25. *Does the rule include minimum requirements for compliance?*

No, each work setting is unique and the employer should tailor his/her Accident Prevention Program to address the needs of the workplace. WRD 11.20, Application of Standards to Address Heat Related Illness in the Outdoor Environment

<http://www.lni.wa.gov/Safety/Rules/Policies/default.asp> may be referenced for additional information on enforcement policy.

Related general and industry specific regulations (e.g. drinking water and first aid) do include minimum requirements and may be cited as appropriate.

26. *Will L&I use wet bulb globe temperature (WBGT) measurements to assess the outdoor environment?*

WBGT measures may be taken as part of an overall compliance evaluation of a worksite. However, a violation of WAC 296-62-09013 will not be issued unless the NOAA heat stress Index exceeds 100. Other violations such as accident prevention program, drinking water availability, and training may be cited under their specific WAC rules.

27. *what is the sampling instrument that DOSH staff will be using to assess temperature and relative humidity, and where can I buy the same type of instrument?*

DOSH has purchased “The Temperature Gauge”, Model #35519-049. There are many places it can be purchased. You may want to use a search engine (i.e., Google, MSN, Yahoo, etc.) to find suppliers of this particular instrument.